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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,521	10/12/2001	David S. Allison	0007056-0204/P6024	3955

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EXAMINER

FOWLKES, ANDRE R

ART UNIT

PAPER NUMBER

2192

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/977,521	ALLISON, DAVID S.	
	Examiner	Art Unit	
	Andre R. Fowlkes	2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 11-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-6 & 11-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/16/05 has been entered.

2. Claims 1-6 & 11-18 are pending. Claims 1 and 11-13 have been amended.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 and 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Josuttis, "C++ Standard Library: A Tutorial and Reference", sections 7.2.0-7.2.5, 9.4.0 & 13.3.0-13.3.3, Addison Wesley, ISBN: 0-201-37926-0, (art made of record), in view of Christiansen, et al., (Christiansen), "Learning Perl", O'Reilly, ISBN: 1-56592-284-0.

As per claim 1, Josuttis discloses a **method for iterating in a dynamically typed programming language** (p. 1:1, "C++", and p. 2:10, "STL Iterators"), **comprising:**

- **defining a class wherein said class defines a special operator** (p. 19:2-3, "In C and C++, (the) operators << and >> are used for shifting bits of an integer ... The classes basic_istream<> and basic_ostream<> overload operators >> and << as the standard I/O operators. Thus in C++, the shift operators become the I/O operators (when an instance of the basic_istream class is the argument of the operator"),

- **instantiating an instance of said class; and calling a special operator of said class when an operator corresponding to the special operator is called and the instance of the class is an argument of said operator** (p. 19:2-3, "In C and C++, (the) operators << and >> are used for shifting bits of an integer ... The classes basic_istream<> and basic_ostream<> overload operators >> and << as the standard I/O operators. Thus in C++, the shift operators become the I/O operators (when an instance of the basic_istream class is the argument of the << or >> operators"),

- **wherein said class defines at least one action to perform when said special operator is called**, (p. 19:2-3, "In C and C++, (the) operators << and >> are used for shifting bits of an integer ... The classes basic_istream<> and basic_ostream<> overload operators >> and << as the standard I/O operators. Thus in C++, the shift operators become the I/O operators (performs an input/output operation).

Josuttis doesn't explicitly disclose that said class is written in a dynamically typed language.

However, Christiansen, in an analogous environment, discloses that **the class is written in a dynamically typed language**, (p. 6:18, "used to increment the iterator (written in Perl, a dynamically typed language)")

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the teachings of Christiansen into the system of Josuttis to have a the class written in a dynamically typed language. The modification would have been obvious because one of ordinary skill in the art would have wanted the flexibility of using the well known and well documented iterator while programming in any dynamically typed programming language.

As per claim 2, the rejection of claim 1 is incorporated and further, Josuttis discloses that **special operator return a list of values** (p. 4:3-4, "Input iterators can ... step forward element-by-element ... (and) return values element wise (a list of values)").

As per claim 3, the rejection of claim 2 is incorporated and further, Josuttis discloses **iterating through said list of values** (p. 4:3, "Input iterators can ... step forward (i.e. iterate through a list of values) element-by-element).

As per claim 4, the rejection of claim 3 is incorporated and further, Josuttis discloses that **said special operator is a foreach operator** (p. 14:3, "The for_each()

Art Unit: 2192

algorithm (i.e. special operator) is very flexible because it allows you to access, process, and modify each element in many different ways”).

As per claim 5, the rejection of claim 1 is incorporated and further, Josuttis discloses that **said special operator is an increment operator** (p. 9:3-4, “Bidirectional iterators are forward iterators that provide the additional ability to iterate backward over the elements. Thus, they provide the decrement (and increment) operator”).

As per claim 6, the rejection of claim 1 is incorporated and further, Josuttis discloses that **said special operator is a decrement operator** (p. 9:3-4, “Bidirectional iterators are forward iterators that provide the additional ability to iterate backward over the elements. Thus, they provide the decrement (and increment) operator”).

As per claims 11 and 12, Josuttis also discloses such claimed limitations as addressed in claims 5 and 6 above, respectively.

As per claims 13-18, this is a computer program product version of the claimed method discussed above, in claims 1-6, wherein all claimed limitations have also been addressed and/or cited as set forth above. For example, see Josuttis's STL iterator, p. 3:1-9:4 and Christiansen's iterator, p. 6:18.

Response to Arguments

Art Unit: 2192

4. Applicants arguments have been considered but they are not persuasive.

In the remarks, the applicant has argued substantially that:

1) Neither Josuttis nor Christiansen disclose operators which include functionality to use instances of classes as arguments, at p. 6:7-9.

Examiner's response:

1) The examiner disagrees with applicant's characterization of the applied art. Operator overloading is a well known and well document technique used to allow operators to use instances of classes as arguments. Josuttis discloses (overloaded) operators which include functionality to use instances of classes as arguments, at p. 19:2-3. Applicant's assistance is greatly appreciated in describing how the instant invention is distinguished from the applied art. Is the instant application attempting to perform operator overloading in a new or different way?

In the remarks, the applicant has argued substantially that:

2) Neither Josuttis nor Christiansen disclose classes that define special operators and actions to perform when the special operators are called, wherein the special operators are called when the corresponding operator includes an instance of the class as an argument, at p. 6:10-12.

Examiner's response:

2) The examiner disagrees with applicant's characterization of the applied art.

Operator overloading is a well known and well document technique used to allow operators to use instances of classes as arguments. Josuttis discloses classes that define special (overloaded) operators and actions to perform when the special operators are called, wherein the special operators are called when the corresponding operator includes an instance of the class as an argument, at p. 19:2-3. Applicant's assistance is greatly appreciated in describing how the instant invention is distinguished from the applied art.

Conclusion


5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre R. Fowlkes whose telephone number is (571) 272-3697. The examiner can normally be reached on Monday - Friday, 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571)272-3695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2192

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ARF



TUAN DAM
SUPERVISORY PATENT EXAMINER